Remarks

The above Amendments and these Remarks are in reply to the Office Action mailed July 17, 2003. The fee for addition of new claims is included herewith.

Prior to the Office Action mailed July 17, 2003, claims 1-25 were pending in the Application. In the Office Action, the Examiner rejected claims 1-25. The present Response amends Claims 1-3, 5, 7-16, 18-20 and 22-25; and adds new Claims 26-31, leaving for the Examiner's present consideration Claims 1-31. Reconsideration of the Application, as amended, is respectfully requested.

I. Summary of Examiners Rejections

In the Office Action mailed July 17, 2003, the Examiner objected to the specification and to Claims 5 and 11, for various informalities. The Examiner rejected Claims 1-8, 10, 12 and 14 under 35 U.S.C. 112, for omitting essential steps. The Examiner also rejected Claims 1, 3, 5 and 8 under 35 U.S.C. 102(b) as being anticipated by Jenkins, IV et al. (U.S. Patent No. 6,393,591 B1). The Examiner also rejected Claim 2 under 35 U.S.C. 103(a) as being unpatentable over Jenkins, IV et al. in view of Eckley (U.S. Patent No. 6,163,797). The Examiner also rejected Claims 4, 6, 7, 10 and 12 under 35 U.S.C. 103(a) as being unpatentable over Jenkins, IV et al. in view of Raimi et al. (U.S. Patent No. 6,131,080). The Examiner also rejected Claims 9, 11, 13, 15-17 and 19-25 under 35 U.S.C. 103(a) as being unpatentable over Raimi et al. in view of Kruger et al. (WO 00/77632).

II. Summary of Applicants' Amendment

The present Response amends the specification; Claims 1-3, 5, 7-16, 18-20 and 22-25; and adds new Claims 26-31, leaving for the Examiner's present consideration Claims 1-31. Reconsideration of the Application, as amended, is respectfully requested.

Applicant reserves the right to prosecute any originally presented claims in a continuing or future application.

III. Specification

The present response amends the specification to acknowledge JMX to be a trademark of Sun Microsystems, Inc. Applicant respectfully submits that no new matter is being added by this amendment.

IV. Claim Objections

In the Office Action mailed July 17, 2003, the Examiner objected to Claims 5 and 11 for various informalities. Claims 5 and 11 have been amended by the present Response to correct the informalities. Reconsideration thereof is respectfully requested.

V. Claim Rejections under 35 U.S.C. § 112, second paragraph

In the Office Action mailed July 17, 2003, claims 1-8, 10, 12 and 14 were rejected under 35 U.S.C. 112, second paragraph for omitting essential steps.

The present response amends Claim 1, as described in further detail below, to more clearly define the invention therein as comprising a JMX monitor object adapted to monitor said time varying signal and to return appropriate testing values. Applicant respectfully submits that Claim 1 now conforms to the requirements of 35 U.S.C. 112, and reconsideration thereof is respectfully requested.

Claims 2-8 depend from and include all of the limitations and features of Claim 1. In view of the amendments to Claim 1, Applicant respectfully submits that Claims 2-8 likewise now conform to the requirements of 35 U.S.C. 112, and reconsideration thereof is respectfully requested.

Claims 10,12 and 14 have been amended and no longer ultimately depend from Claim 1, rendering moot the rejection under 35 U.S.C. 112 of these particular claims.

VI. Claim Rejections under 35 U.S.C. § 102(b)

Claims 1, 3, 5 and 8

In the Office Action mailed July 17, 2003, claims 1, 3, 5 and 8 were rejected under 35 U.S.C. 102(b) as being anticipated by Jenkins, IV et al. (U.S. Patent No. 6,393,591 B1, hereafter Jenkins).

Claim 1

Claim 1 has been amended by the current Response to more clearly define the embodiment of the invention therein. As amended, Claim 1 defines:

> *1. (Amended) A system for testing JMX monitors, the system comprising:*
> *(a) a generator software object adapted to generate a time varying signal;*
> *(b) a JMX monitor object adapted to monitor said time varying signal and to return appropriate testing values; and*
> *(c) a notifier software object adapted to generate a notification in response to the monitoring of said time varying signal by the JMX monitor object.*

Claim 1, as currently amended, defines a system that comprises a generator software object adapted to generate a time varying signal, a JMX monitor object adapted to monitor said time varying signal and to return appropriate testing values, and a notifier software object adapted to generate a notification in response to the monitoring of said time varying signal. Applicant respectfully submits that these features are not disclosed by the cited references. Particularly, in the embodiment of the invention defined by Claim 1, each of the generator, JMX monitor, and notifier are software objects. The generator, monitor and notifier software objects are used to test another software component (the JMX monitor object). Furthermore, the JMX monitor object is the entity that both monitors the signal and that is being tested.

Jenkins discloses a system for testing an integrated circuit chip plugged into a circuit board at a customer's computer, using a host computer that generates and transmits test vectors over the Internet to the customer computer. The customer's computer then tests the integrated chip and transmits the test results to the host computer over the Internet (Abstract). Both the host computer

and the customer computer disclosed in Jenkins are hardware components, not software objects. Furthermore the host computer and the customer computer are used to test another hardware component (an integrated circuit chip) on a customer's computer, rather than a software object. Furthermore, the testing disclosed in Jenkins is performed on the integrated chip plugged into a circuit board at the customer's computer, and not on the customer computer itself.

Applicant respectfully submits that the host computer and the customer computer disclosed in Jenkins are not software objects, as defined by Claim 1, as amended, wherein each of the generator, JMX monitor and the notifier are software objects. Furthermore, as defined by claim 1, the generator, JMX monitor and notifier software objects are used to test a software component (the JMX monitor object). Furthermore, unlike the customer computer in Jenkins, in the embodiment of the invention defined by Claim 1 the JMX monitor is both the object monitoring the signal and the object being tested.

In view of the above comments, Applicant respectfully submits that Claim 1 is neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

Claims 3, 5 and 8

The comments provided above with respect to Claim 1 are incorporated herein by reference. Claims 3, 5 and 8 depend from and include all of the limitations and features of Claim 1. In view of the above-described amendments to Claim 1, and for similar reasons as given above with respect to Claim 1, Applicant respectfully submits that Claims 3, 5 and 8 are similarly neither anticipated by, nor obvious in view of, the cited references, and reconsideration thereof is respectfully requested.

VII. Claim Rejections under 35 U.S.C. § 103(a) - Claim 2

In the Office Action mailed July 17, 2003, claim 2 was rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins in view of Eckley (U.S. Patent No. 6,163,797).

Claim 2

The comments provided above with respect to Claim 1 are incorporated herein by reference. Claim 2 depends from and includes all of the limitations and features of Claim 1. In view of the above-described amendments to Claim 1, and for similar reasons as given above with respect to Claim 1, Applicant respectfully submits that Claim 2 is neither anticipated by, nor obvious in view of, the cited references, and reconsideration thereof is respectfully requested.

VIII. Claim Rejections under 35 U.S.C. § 103(a) - Claims 4, 6, 7, 10, 12 and 14

In the Office Action mailed July 17, 2003, Claims 4, 6, 7, 10, 12 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins in view of Raimi et al. (U.S. Patent No. 6,131,080, hereafter Raimi).

Claims 4-7

The comments provided above with respect to Claim 1 are incorporated herein by reference. Claims 4-7 depend from and include all of the limitations and features of Claim 1. In view of the above-described amendments to Claim 1, and for similar reasons as given above with respect to Claim 1, Applicant respectfully submits that Claims 4-7 are likewise neither anticipated by, nor obvious in view of, the cited references, and reconsideration thereof is respectfully requested.

Claims 10 and 12

Through inadvertent typographical error, Claims 10 and 12 had been originally presented as depending from Claim 1. Claims 10 and 12 have been amended by the present Response and no longer depend from Claim 1, but instead properly depend from Claim 9, rendering moot the rejection under 35 U.S.C. 103 of these particular claims. Applicant respectfully submits that Claims 10 and 12, as amended, and as further described below with respect to claim 9, are neither anticipated by, nor obvious in view of, the cited references, and reconsideration thereof is respectfully requested.

Claim 14

Through inadvertent typographical error, Claim 14 had been originally presented as depending from Claim 1. Claim 14 has been amended by the present Response and no longer depends from Claim 1, but instead properly depends from Claim 13, rendering moot the rejection under 35 U.S.C. 103 of this particular claim. Applicant respectfully submits that Claim 14, as amended, and as further described below with respect to claim 13, is neither anticipated by, nor obvious in view of, the cited references, and reconsideration thereof is respectfully requested.

IX. Claim Rejections under 35 U.S.C. § 103(a) - Claims 9, 11, 13, 15, 16 and 19-25

In the Office Action mailed July 17, 2003, Claims 9, 11, 13, 15, 16 and 19-25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Raimi in view of Kruger et al. (WO 00/77632, hereafter Kruger).

Claim 9

Claim 9 has been amended by the current Response to more clearly define the embodiment of the invention therein. As amended, Claim 9 defines:

> *9. (Amended) A signal generator for use in testing software objects comprising:*
> *(a) a generator software object adapted to generate a time varying signal; and*
> *(b) a library of equations for use in said generator software object, each equation representing a time varying signal capable of being generated by said generator software object.*

Claim 9, as currently amended, defines a signal generator comprising a generator software object adapted to generate a time varying signal, and a library of equations for use in the generator software object, wherein each equation represents a time varying signal capable of being generated by the generator software object.

Raimi discloses a simulation monitor for use with electronic circuit design and simulation systems, that assists in identifying paths within a circuit. The simulation monitor generates a monitor file which instantiates a firing equation that is triggered by test vectors (Abstract). The firing equation is generated from the output of a static timing tool. The equation calculates the value of every signal in the simulation model for which specific test vectors exercise the particular path (Col 2, Line 64 - Col 3, Line 23). The test vectors which trigger the firing equation can be monitored and used for hardware test at a later time (Abstract). This use suggests that the firing equations must be consistent with time and hence cannot be time varying. Furthermore, the equations disclosed in Raimi are boolean in nature (Col 9, Lines 22-32), indicating the outputs of these equations to be either true or false, and that time is not a variable.

Kruger teaches enabling the management of a Java object by introspection, and by providing an MbeanInfo object as a result. However, Kruger does not disclose any testing of the Mbean objects, nor does Kruger disclose the use of a time-varying signal.

Conversely, the embodiment of the invention defined by claim 9 uses a time varying signal, i.e. one that uses time as one of the variables in the equation, and which is used to test software objects. The signal generator comprises a generator software object adapted to generate a time varying signal; and a library of equations for use in said generator software object, each equation representing a time varying signal capable of being generated by said generator software object. Applicant respectfully submits that these features are neither disclosed or suggested by the cited references.

In view of the above comments, Applicant respectfully submits that Claim 9 is neither anticipated by, nor obvious in view of the cited references, and reconsideration thereof is respectfully requested.

Claims 10-12

The comments provided above with respect to Claim 9 are incorporated herein by reference. Claims 10 and 12 have been amended by the present Response and no longer ultimately depend from Claim 1, but instead properly depend from Claim 9. As presently amended, Claims 10-12

ultimately depend from and include all the limitations and features of Claim 9. For similar reasons as provided above with respect to Claim 9, Applicant respectfully submits that Claims 10-12 are neither anticipated by, nor obvious in view of, the cited references, and reconsideration thereof is respectfully requested.

Claim 13

The comments provided above with respect to Claim 9 are incorporated herein by reference. Claim 13 has been amended by the current Response to more clearly define the embodiment of the invention therein. As amended, Claim 13 defines:

> *13. (Amended) A method for generating a time varying signal, the method comprising the steps of:*
>
> *(a) selecting an equation from a library, the equation corresponding to a time varying signal to be generated;*
>
> *(b) specifying the appropriate parameters for the equation; and*
>
> *(c) generating said time varying signal corresponding to the equation with the parameters using a generator software object.*

Claim 13 defines a method for generating time varying signal that comprises the steps of selecting an equation corresponding to a time varying signal generated from a library, specifying the appropriate parameters for the equation and generating the time varying signal corresponding to the equation with the parameters using a generator software object. For similar reasons as provided above with respect to Claim 9, Applicant respectfully submits that Claim 13, as amended, and Claim 14 dependent therefrom, are neither anticipated by, nor obvious in view of, the cited references, and reconsideration thereof is respectfully requested.

Claim 15

The comments provided above with respect to Claims 1 and 9 are incorporated herein by reference. Claim 15 has been amended by the current Response to more clearly define the embodiment of the invention therein. As amended, Claim 15 defines:

15. (Amended) A method for testing a JMX monitor, the method comprising the steps of:

(a) generating a time varying signal using a generator software object;

(b) polling said generator software object at a frequency at least twice the frequency of the generated time varying signal using a monitor object of the JMX monitor; and

(c) returning a testing value for each polling of said generator software object.

Claim 15 defines a method for testing JMX monitor comprising the steps of generating a time varying signal using a generator software object, polling the generator software object at a frequency at least twice the frequency of the generated time varying signal using a monitor object of the JMX monitor and returning a testing value for each polling of generator software object. For similar reasons as provided above with respect to Claims 1 and 9, Applicant respectfully submits that Claim 15, as amended, is neither anticipated by, nor obvious in view of, the cited references, and reconsideration thereof is respectfully requested.

Claims 16-21

The comments provided above with respect to Claim 15 are incorporated herein by reference. Claims 16-21 depend from and include all of the limitations and features of Claim 15. In view of the above-described amendments to Claim 15, and for similar reasons as given above with respect to Claim 15, Applicant respectfully submits that Claims 16-21 are likewise neither anticipated by, nor obvious in view of, the cited references, and reconsideration thereof is respectfully requested.

Claim 22

The comments provided above with respect to Claims 1 and 9 are incorporated herein by reference. Claim 22 has been amended by the current Response to more clearly define the embodiment of the invention therein. As amended, Claim 22 defines:

22. (Amended) A computer-readable medium, comprising:

(a) means for selecting an equation from a library, the equation corresponding to a time varying signal to be generated;

(b) means for specifying parameters for the equation; and

(c) means for generating a time varying signal corresponding to the equation, with the parameters, using a generator software object.

Claim 22 defines a computer-readable medium comprising of means for selecting an equation from a library, the equation corresponding to a time varying signal to be generated and further means for specifying parameters for the equation and further means for generating a time varying signal corresponding to the equation, with the parameters, using a generator software object. For similar reasons as provided above with respect to Claims 1 and 9, Applicant respectfully submits that Claim 22, as amended, is neither anticipated by, nor obvious in view of, the cited references, and reconsideration thereof is respectfully requested.

Claim 23

The comments provided above with respect to Claims 1 and 9 are incorporated herein by reference. Claim 23 has been amended by the current Response to more clearly define the embodiment of the invention therein. As amended, Claim 23 defines:

23. (Amended) A computer program product for execution by a server computer for testing a JMX monitor, comprising:

(a) computer code for selecting an equation from a library, the equation corresponding to a time varying signal to be generated;

(b) computer code for specifying parameters for the equation; and

(c) computer code for generating a time varying signal corresponding to the equation, with the parameters, using a generator software object.

Claim 23 defines a computer program for execution by a server for testing a JMX monitor comprising of computer code for selecting an equation corresponding to a time varying signal to be generated from a library, computer code for specifying parameters for the equation and further computer code for generating a time varying signal corresponding to the equation, with the parameters, using a generator software object. For similar reasons as provided above with respect to Claims 1 and 9, Applicant respectfully submits that Claim 23, as amended, is neither anticipated by, nor obvious in view of, the cited references, and reconsideration thereof is respectfully requested.

Claim 24

The comments provided above with respect to Claims 1 and 9 are incorporated herein by reference. Claim 24 has been amended by the current Response to more clearly define the embodiment of the invention therein. As amended, Claim 24 defines:

24. (Amended) A system for testing a JMX monitor, comprising:

(a) means for selecting an equation from a library, the equation corresponding to a time varying signal to be generated;

(b) means for specifying parameters for the equation; and

(c) means for generating a time varying signal corresponding to the equation, with the parameters, using a generator software object.

Claim 24 includes testing a JMX monitor, comprising means for selecting an equation from a library, the equation corresponding to a time varying signal to be generated and further means for specifying parameters for the equation and further means for generating a time varying signal corresponding to the equation, with the parameters, using a generator software object. For similar reasons as provided above with respect to Claims 1 and 9, Applicant respectfully submits that Claim 24, as amended, is neither anticipated by, nor obvious in view of, the cited references, and reconsideration thereof is respectfully requested.

Claim 25

The comments provided above with respect to Claims 1 and 9 are incorporated herein by reference. Claim 25 has been amended by the current Response to more clearly define the embodiment of the invention therein. As amended, Claim 25 defines:

> *25 (Amended) A computer system comprising:*
> *a processor;*
> *object code executed by said processor, said object code configured to:*
> *(a) select an equation from a library, the equation corresponding to a time varying signal to be generated;*
> *(b) specify parameters for the equation; and*
> *(c) generate a time varying signal corresponding to the equation, with the parameters, using a generator software object.*

Claim 25 includes a processor and an object code executed by the processor, wherein the object code is configured to select an equation from a library, the equation corresponding to a time varying signal to be generated and further configured to specify parameters for the equation and further configured to generate a time varying signal corresponding to the equation, with the parameters, using a generator software object. For similar reasons as provided above with respect to Claims 1 and 9, Applicant respectfully submits that Claim 25, as amended, is neither anticipated

by, nor obvious in view of, the cited references, and reconsideration thereof is respectfully requested.

X. Additional Amendments

Claims 26-31

Claims 26-31 have been newly added by the present Response. Applicant respectfully requests that new Claims 26-31 be included in the Application and considered therewith.

XI. Conclusion

The references cited by the Examiner but not relied upon have been reviewed, but are not believed to render the claims unpatentable, either singly or in combination.

In view of the above amendments and remarks, it is respectfully submitted that all of the Claims now pending in the subject patent application should be allowable, and reconsideration thereof is respectfully requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

Enclosed is a PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. § 1.136 for extending the time to respond up to and including today, January 20.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

Date: January 20, 2004

By: _____

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